

## **REMARKS**

Applicant respectfully requests reconsideration and allowance of claims 1-5, 7-20, and 22 that are pending, in the above-identified patent application. Claims 1, 19, 20, 22 are currently amended in this response. Support for the amendments can be found in the specification as filed at least at page 18 line 25 – page 19 line 2. In view of the following discussion, applicant submits that all pending claims are in condition for allowance. No new matter is introduced by the way of these amendments.

### **I. Rejection of Claims 1, 2, 6 and 19-22 under 35 U.S.C. §102(b):**

At numbered part 5 of the subject Office Action, the Examiner has rejected claims 1, 2, 6 and 19-22 under 35 U.S.C. §102(b) as being unpatentable over Ohba (US 20020097247). Applicant respectfully requests that this rejection be withdrawn as the cited art fails to disclose all aspects as recited in independent claims 1 and 19-22.

In particular, independent claim 1 recites: means for generating a motion image map, the motion image map representing areas with high frequency and less frequency of motion of the operator and being obtained by layering images of difference that represent the differences in images between frames of said mirrored video image feature, said image combining means being adapted to determine an area where said object image is to be combined, depending on a range and frequency of the motion of the image of said operator as determined on from the motion image map. Independent claim 22 recites similar features.

Independent claim 19 recites: generating a motion image map representing areas with high frequency and less frequency of motion of the operator by layering images of difference that represent difference in images between frames of said mirrored video image feature, determining an area where said object image is to be generated based on a range and frequency of motion of the image of said operator as determined from the motion image map. Independent claim 21 recites similar features.

Ohba does not disclose such claim features.

In particular, Ohba relates to an image processor that captures moving images consecutively

in a time series to generate mirrored moving images. Of these mirrored moving images, the image processing system combines object images expressing objects such as menu and cursor at positions where remarked objects such as the eyes and hands of the operator (also referred to as "targets") to generate a combined image and displays this combined image on the display device 3 in real time (*See, Ohba paragraph [0037]*). The superimposing image generator 106 draws a combined image obtained by superimposing the mirrored moving image output from the image inverter 102 on the object image generated by the object controller 105 in the frame memory 15. Alternatively, the combined image is obtained by displaying the object image on the mirrored moving image using publicly known imposing processing. (*See, Ohba paragraphs [0055] - [0056]*). The difference value detector 107 compares the image features of the mirrored moving image of the combined image generated by the superimposing image generator 106 frame by frame and derives the difference value of the image features between the mirrored moving images of the preceding and following frames. Furthermore, the difference value detector 107 generates a difference image between the mirrored moving images of the preceding and following frames as required. (*See, Ohba paragraph [0057]*).

Therefore, in accordance with the aforementioned description, Ohba describes a superimposing image generator 106 that generates an image wherein an object image is superimposed on a target or vice-versa. At page 4 of the subject Final Office Action, the Examiner contends that Ohba discloses a means for generating a motion image map as recited in the subject claims at portions wherein Ohba discloses the difference value detector 107. Applicant respectfully disagrees with such contention. As described *supra*, Ohba discloses a difference value detector 107 that derives the difference value of the image features between the *combined* images of the preceding and following frames. This is contrary to the claimed subject matter wherein the means for generating a motion image map generates the image map from the mirrored video image prior to combining the images by layering images of difference that represent the *differences in images* between frames *of said mirrored video image*. (*See also*, applicant's claim 19 wherein the step of generating a motion image map precedes the step of combining).

Additionally, the Examiner also contends that, since the menu image of Ohba has a hierarchical structure, the main menu to pull-down menu is presented based on hand movement of

the operator wherein each menu has its own location. While Ohba discloses a case wherein instructions are entered to the menu image by detecting the amount of the movement of the hand in the area in which the menu image is displayed (*see*, Ohba paragraph [0069]), nowhere does Ohba teach or suggest that the exact area within an image of the operator wherein the menu image is superimposed in order to generate the combined image is determined based on the range and frequency of motion of the said operator. For example, as clearly seen from Fig. 6 of Ohba, which shows a combined image consisting of the mirrored moving image of the operator superimposed with the object image, the menu image is completely out of reach of the hand of the operator. (*See*, Ohba Fig. 6 and related description at paragraph [0068]). Hence, it is clear that the area wherein the menu image is displayed within the combined image of Ohba was not determined based on the range or frequency of motion of the operator's hand (target). Therefore, the fact that the entries from hierarchical menu structure are selected based on the operator's hand cannot be interpreted to disclose "determining an area where said object image is to be combined, depending on a range and frequency of the motion of the image of said operator as determined on from the motion image map" as recited in independent claim 1 and other independent claims.

Finally, Ohba also does not disclose means for generating a motion image map, the motion image map representing areas with high frequency and less frequency of motion of the operator as recited in independent claims 1, 19 and 20.

In contrast, the claimed subject matter recites determining an area within a combined image where the object image is to be generated based on a range and frequency of motion of the image of the operator as determined from the motion image map, and producing a combined image that includes the image of the operator and the object image (*See*, for example, steps S102-S104 of Fig. 4 of applicant's drawings). Thus, the menu is presented (step 104) only after a presentation area is selected (step 103). Moreover, as recited in the independent claims, the motion image map can quantitatively represent the motion of an operator. The motion image map can represent areas with much motion, less motion, and no motion of an operator. (*See*, applicant's specification as filed at page 18 line 25 – page 19 line 2). Ohba does not disclose such aspects.

In view of at least the foregoing, it can be concluded that Ohba does not disclose an identical invention as recited in independent claims 1, 19, 20 and 22. Hence, it is requested that this rejection be withdrawn with respect to these claims and all claims depending there from.

**II. Rejection of Claim 3 under 35 U.S.C. §103(a):**

At page 9 of the Office Action, the Examiner has rejected claim 3 under 35 U.S.C. §103(a) as being obvious over Ohba. Applicant traverses the rejection and submits that this rejection should be withdrawn for at least the following reasons. As detailed *supra*, Ohba does not disclose all aspects recited in independent claim 1 from which the subject claim depends. Hence, withdrawal of this rejection with respect to claim 3 is respectfully requested.

**III. Rejection of Claim 4 under 35 U.S.C. §103(a):**

At page 10 of the Office Action, the Examiner has rejected claim 4 under 35 U.S.C. §103(a) as being obvious over Ohba in view of Salter (U.S. 20030151628). Applicant traverses the rejection and submits that this rejection should be withdrawn for at least the following reasons. Ohba in view of Salter, alone or in combination, fail to teach or suggest all aspects recited in independent claim 1, from which the subject claim depends.

As discussed *supra*, Ohba does not disclose all features of amended independent claim 1. As the teachings of Salter that the Examiner alleges is combinable with Ohba do not cure such deficiencies, applicant respectfully requests that the obviousness rejection of the subject claims be withdrawn. More particularly, Salter relates to a computer implements a graphical user interface for teaching users to play the musical instrument. However, alone or in combination with Ohba, Salter fails to teach or suggest determining an area for presenting the object image and then generating the object image within an area of the combined image in such a manner that the object image is displayed in an area that an image of a hand of the operator can reach as recited in independent claim 1. Salter also fails to teach or suggest generating a motion image map as recited in independent claim 1. In view of at least the foregoing, it is requested that this rejection should be withdrawn with respect to claim 4 which depends therefrom.

**IV. Rejection of Claims 5 Under 35 U.S.C. §103(a):**

At page 11 of the Office Action, the Examiner has rejected claim 5 under 35 U.S.C. §103(a) as being obvious over Ohba in view of Darrel (U.S. 6,445,810). Applicant traverses the rejection and submits that this rejection should be withdrawn for at least the following reasons. Ohba in view of Darrel, alone or in combination, fail to teach or suggest all aspects recited in independent claim 1, from which the subject claim depends.

As discussed *supra*, Ohba does not disclose all features of amended independent claim 1. As the teachings of Darrel that the Examiner alleges is combinable with Ohba do not cure such deficiencies, applicant respectfully request that the obviousness rejection of the subject claims be withdrawn. More particularly, Darrel relates to a system wherein computer vision and computer graphics are combined to robustly track a target (e.g., a user) and perform a function based upon the image and/or the identity attributed to the target's face. However, alone or in combination with Ohba, Darrel fails to teach or suggest determining an area for presenting the object image and then generating the object image within an area of the combined image in such a manner that the object image is displayed in an area that an image of a hand of the operator can reach as recited in independent claim 1. Darrel also fails to teach or suggest generating a motion image map as recited in independent claim 1. In view of at least the foregoing, it is requested that this rejection should be withdrawn with respect to claim 5 which depends therefrom.

**V. Rejection of Claim 7 Under 35 U.S.C. §103(a):**

At page 11 of the Office Action, the Examiner has rejected claim 7 under 35 U.S.C. §103(a) as being obvious over Ohba in view of Dooley (U.S. 20040215689). Applicant traverses the rejection and submits that this rejection should be withdrawn for at least the following reasons. Ohba in view of Dooley, alone or in combination, fail to teach or suggest all aspects recited in independent claim 1, from which the subject claim depends.

As discussed *supra*, Ohba does not disclose all features of amended independent claim 1. As the teachings of Dooley that the Examiner alleges is combinable with Ohba do not cure such deficiencies, applicant respectfully request that the obviousness rejection of the subject claims be

withdrawn. More particularly, Dooley relates to recognizing gestures from printed media, retrieving information related to the gesture and speaking aloud at least a portion of the retrieved information.

However, alone or in combination with Ohba, Dooley fails to teach or suggest determining an area for presenting the object image and then generating the object image within an area of the combined image in such a manner that the object image is displayed in an area that an image of a hand of the operator can reach as recited in independent claim 1. Dooley also fails to teach or suggest generating a motion image map as recited in independent claim 1. In view of at least the foregoing, it is requested that this rejection should be withdrawn with respect to claim 7 which depends therefrom.

#### **VI. Rejection of Claims 8 and 15 Under 35 U.S.C. §103(a):**

At page 12 of the Office Action, the Examiner has rejected claims 8 and 15 under 35 U.S.C. §103(a) as being obvious over Ohba in view of Imagawa (U.S. 6,353,764). Applicant traverses the rejection and submits that this rejection should be withdrawn for at least the following reasons. Ohba in view of Imagawa, alone or in combination, fail to teach or suggest all aspects recited in independent claim 1, from which the subject claims depend.

As discussed *supra*, Ohba does not disclose all features of amended independent claim 1. As the teachings of Imagawa that the Examiner alleges is combinable with Ohba do not cure such deficiencies, applicant respectfully request that the obviousness rejection of the subject claims be withdrawn. More particularly, Imagawa relates to monitoring a person's attributes and based on the results, in predetermined content of the control, to control equipment to be controlled, further, to monitor said person's peripheral environment and also by using these results to execute said control. However, alone or in combination with Ohba, Imagawa fails to teach or suggest determining an area for presenting the object image and then generating the object image within an area of the combined image in such a manner that the object image is displayed in an area that an image of a hand of the operator can reach as recited in independent claim 1. Imagawa also fails to teach or suggest generating a motion image map as recited in independent claim 1. In view of at least the foregoing, it is requested that this rejection should be withdrawn with respect to claims 8, 15 which depend

therefrom.

**VII. Rejection of Claims 9-11 and 16-18 Under 35 U.S.C. §103(a):**

At page 16 of the Office Action, the Examiner has rejected claims 9-11 and 16-18 under 35 U.S.C. §103(a) as being obvious over Ohba in view of Imagawa and further in view of Cortjens (U.S. 5,528,289). Applicant traverses the rejection and submits that this rejection should be withdrawn for at least the following reasons. Ohba in view of Imagawa and Cortjens, alone or in combination, fail to teach or suggest all aspects recited in independent claim 1, from which the subject claims depend.

As discussed *supra*, Ohba in view of Imagawa do not disclose all features of amended independent claim 1. As the teachings of Cortjens that the Examiner alleges is combinable with Ohba and Imagawa do not cure such deficiencies, applicant respectfully request that the obviousness rejection of the subject claims be withdrawn. More particularly, Cortjens relates to a video conferencing system wherein a user can specify an area of interest on a display screen and cause the camera capturing the video to pan and/or tilt in order to center the desired area of interest on the screen and zooms in order to fill the display screen with the area of interest. However, alone or in combination with Ohba and Imagawa, Cortjens fails to teach or suggest determining an area for presenting the object image and then generating the object image within an area of the combined image in such a manner that the object image is displayed in an area that an image of a hand of the operator can reach as recited in independent claim 1. Cortjens also fails to teach or suggest generating a motion image map as recited in independent claim 1. In view of at least the foregoing, it is requested that this rejection should be withdrawn with respect to claims 9-11 and 16-18 which depend therefrom.

**VIII. Rejection of Claims 12-14 Under 35 U.S.C. §103(a):**

At page 20 of the Office Action, the Examiner has rejected claims 12-14 under 35 U.S.C. §103(a) as being obvious over Ohba in view of Imagawa and further in view of Darrell and Cortjens. Applicant traverses the rejection and submits that this rejection should be withdrawn for at least the following reasons. As discussed *supra*, Ohba in view of Imagawa, Darrell and Cortjens, alone or in

combination, fail to teach or suggest all aspects recited in independent claim 1, from which the subject claims depend. In particular, the combination of cited art fails to teach or suggest generating a motion image map as recited in independent claim 1. In view of at least the foregoing, it is requested that this rejection should be withdrawn with respect to claims 12-14 which depend therefrom.

**Conclusion:**

In view of the foregoing, applicant submits that the instant claims are in condition for allowance. Early and favorable action is earnestly solicited. In the event there are any fees due and owing in connection with this matter, please charge same to our Deposit Account No. 11-0223.

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Respectfully submitted,

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